

REMARKS

The Examiner's Official Action dated July 11, 1997 has been received and its contents carefully noted. Filed concurrently herewith is a *Request for a One Month Extension of Time* which extends the shortened statutory period for response to November 12, 1997. Accordingly, applicant respectfully submits that this response is being timely filed.

Claims 1-7, 9-10, 13, 16-27 and 30-31 were pending in the present application prior to the above amendment. Claim 25 has been canceled, claims 1-3, 6, 7, 13, 16, 17 and 21 have been amended and new claims 32-35 have been added to recite additional protection to which applicant is entitled. Claims 1, 7, 13, 16, 17, 21 and 32 are independent. Accordingly, claims 1-7, 9, 10, 13, 16-24, 26-27 and 30-35 are now pending in the present application and, for the reasons set forth in detail below, are believed to be in condition for allowance.

The present invention is directed to a liquid crystal device having an active matrix circuit and a driving circuit both formed from a common semiconductor film over a substrate and a semiconductor IC chip disposed on the same substrate. The claims are rejected as anticipated by U.S. Patent 5,539,550 to Spitzer, or in the alternative as obvious based on the combination of Spitzer alone or in combination with Mase.

Spitzer teaches to form each of an active matrix circuit, a driver circuit and a logic circuit separately by using respective thin film Si substrates and then cut them into "tiles." These respective circuits, or "tiles," are mounted on a common module body. The basic difference between Spitzer and the present invention is that in the present invention both the active matrix circuit and the driver circuit are formed from a common semiconductor film formed over the substrate as clearly disclosed in Embodiment 3 of the present application and recited in the claims as amended herewith. This feature is very advantageous for reducing the size of the display device. Moreover, the present invention is further characterized in that a circuit such as a memory or CPU is provided on the

same substrate by using an IC chip rather than thin film transistors. Although it is most desirable to constitute all of the active matrix circuit, driving circuit and this memory or CPU circuit with thin film transistors, this is very difficult in view of the relatively low production yield of the thin film transistors. Because of this, the present invention uses a semiconductor chip for the circuit (memory or CPU) so that the production yield can be improved while the size of the device is minimized.

Since Spitzer fails to teach the formation of the active matrix circuit and the driving circuit from a common semiconductor layer formed on a substrate as claimed, applicant believes that the claims are patentably distinguishable over this reference. Furthermore, applicant has amended several of the independent claims including, for example, claim 1 in order to recite a locational limitation as shown in Fig. 3. Also, claim 7 further recites that the thin film transistor of the active matrix circuit has a lightly doped drain. These additional limitations are not believed to be disclosed or suggested by the prior art of record, and clearly not by Spitzer, and reconsideration is requested for all of these reasons.

With respect to the remaining obviousness rejections, it is respectfully submitted that the secondary references do nothing to overcome the deficiencies noted above with respect to Spitzer. Finally, the informalities noted in claim 21 have been corrected by the amendments herewith and reconsideration of the objection to this claim is requested.

For all of the above reasons, it is respectfully submitted that claims 1-7, 9, 10, 13, 16-24, 26-27 and 30-35 are now in proper condition for allowance. Reconsideration of the pending rejections and consideration of the newly submitted claims is requested. If

the Examiner feels that any further discussions about this case would be beneficial, is it requested that the undersigned be contacted:

Respectfully submitted,



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